



Dart Hawkesbury  
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada  
Tel (613) 632-5200  
Fax 613 632-5246

# Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO041983	ACI001-VC	2	1	Net 30	M304R1.000	304 Round Bar 1.00 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft				24	12/17/2018	24		S138862	Stock	12/13/2018	\$ 12.65 / ft	6		\$307.89	Acier Ouellette Inc.
		3	M304S20GA		304/316 .040 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 receive sf			128		128		S138863	Stock	12/13/2018	\$ 6.08 / sf	6		\$777.61	Acier Ouellette Inc.		
		4	M5052H32S.040		5052-H32 .040 Sheet : MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf			32		32		S138864	Stock	12/13/2018	\$ 3.99 / sf	6		\$127.72	Acier Ouellette Inc.		
		5	M5052H32S.063		5052-H32 .063 Sheet : MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf					32		S138865	Stock	12/13/2018	\$ 6.39 / sf	6		\$204.40	Acier Ouellette Inc.		
		6	MT-1144-R0.750		AISI 1144 Stressproof Round Bar 0.750" : MATERIAL : AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440			22		22		S138866	Stock	12/13/2018	\$ 3.67 / ft	6		\$80.83	Acier Ouellette Inc.		
		7	M6061T6B0.750X00.125		6061-T6 Bar .750 X .125 : MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ- A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ- A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft			100		100		S138867	Stock	12/13/2018	\$ 0.55 / ft	6		\$55.00	Acier Ouellette Inc.		
		Total:											338								



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# PURCHASE ORDER

## PO041983

**Supplier:** ACI001-VC  
Acier Ouellette Inc.  
935 Boul. Du Havre  
Valleyfield  
QC  
J6S 5L1 Canada  
Phone: 800 667 4248  
Fax: 450 377 5696

**PO No:** PO041983

**PO Date:** 12/7/18

**Due Date:** 12/17/18

**Purchase Order**

**Revision:**

**Revision Date:**

**Ship-To Contact:** Lavoie, Chantal  
clavoie@dartaero.com

**E-MAILED**  
**DEC 07 2018**

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**Via:** Ground

**Pymt Terms:** Net 30

**Freight Terms:**

**Special Comments:** quotation no. sou01457135

### Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1		MT-A513-T-4.500W0.250		SEAMLESS ALLOY STEEL ROUND TUBING 4.500 Dia. and 0.250 Wall	Firmed	-	12/17/18	4 ft	0 ft	4 ft	\$40.50/ft	\$162.00
2		M304R1.000		304 Round Bar 1.00 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	-	12/17/18	24 ft	0 ft	24 ft	\$12.654583/ft	\$303.71
3		M304S20GA		304/316 .040 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 receive sf	Firmed	-	12/17/18	128 sf	0 sf	128 sf	\$6.0750781/sf	\$777.61
4		M5052H32S.040		5052-H32 .040 Sheet : MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf	Firmed	-	12/17/18	32 sf	0 sf	32 sf	\$3.99125/sf	\$127.72
5		M5052H32S.063		5052-H32 .063 Sheet : MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf	Firmed	-	12/17/18	32 sf	0 sf	32 sf	\$6.3875/sf	\$204.40



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# PURCHASE ORDER

## PO041983

### Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
6 <i>A</i>		MT-1144-R0.750		AISI 1144 Stressproof Round Bar 0.750" : MATERIAL : AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440	Firmed	-	12/17/18	20 ft	0 ft	20 ft	\$3.674/ft	\$73.48
								<i>22ft</i>			<i>AT 18/12/19</i>	
7 <i>A</i>		M6061T6B0.750X00.125		6061-T6 Bar .750 X .125 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	-	12/17/18	100 ft	0 ft	100 ft	\$0.55/ft	\$55.00
								<i>✓ 100ft</i>			<i>AT 18/12/19</i>	

Grand Total: \$1,703.92

### Order Notes

#### Procurement Quality Clauses

A005 right of entry  
A012 chemical and physical test report  
A016 personnel qualification  
A017 raw material identification (as applicable)  
A026 certification of material conformance  
A041 quality management system  
A042 dart notification by supplier  
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Plex 12/7/18 11:53 AM dart.lavoie.chantal



# ACIER OUELLETTE INC.

935, Boul. du H vre  
Valleberry de Valleyfield (Qu bec) J6S 5L1  
T l.: 450-377-4248 M l.: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 M l.: 514-336-4246 Ext.: 866-456-4242

## DELIVERY - CLIENT

Copy

CO00124561

11697

### Billed to

DART AEROSPACE LTD

1270 , ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

### Shipped to

1270 , ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

Att : CHANTAL LAVOIE T l.: 613-632-5200

Instruction F-M

Delivery Route 5

Customer N  CLI0001056  
Date 2018/12/10  
Delivery date **2018/12/13**  
Your order N  PO041983  
Processed by Elodie Viaud  
Salesman ELODIE VIAUD  
Carrier OUELLETTE VALLEYFIELD  
Credit Terme Net 30 Days

Product Description	Weight	Qty	UM	PCS NB				Internal Use Only			
				CMD	EXP	B/O	IN	I	S	C	OUT
1 TUBE MEC 4.500 OD X .250 (R) TME-4500250 6727 SAW CUT 1 X 4' HEAT : 9516493 TRANSIT ST-J�R�ME 12 D�CEMBRE	45.40	4.00	PI_\$CPI		1 x B/O						
2 ROUND SS 1 304 (R) RSS-1 5747 2 X 12' R/L HEAT : 180311356 M	64.08	24.00	PI_\$CLB		2x12'						
3 SHEET SS 20G SS304-2B (4 X 8) FESS-20G483042B 3430 4 X 4' X 8' HEAT : YU187406	200.96	128.00	PI2_\$CLB		4x4'x8'						
4 PALETTE PALETTE 7573		1.00	UN_\$UN								
5 ALU SHEET .040 (18G) 5052-H32 (4 X 8) FEAL-040485052 3124 1 X 4' X 8' AC22321SDI-2018/12/12 HEAT : 5170210352 M	18.02	32.00	PI2_\$CLB		1 x 4'x8'						
6 ALU SHEET .064 (14G) 5052-H32 (4 X 8) FEAL-064485052 3174 1 X 4' X 8' AC22321-SDI-2018/12/12 HEAT : GFAT807W50003 M	28.83	32.00	PI2_\$CLB		1 x 4'x8'						

CL



# DELIVERY - CLIENT

Copy

CO00124561

Product Description	Qty	Weight	UM	PCS NB			Internal Use Only			
				CMD	EXP	B/O	IN	I	S	C
7 ROUND STRESSPROOF 3/4 (R) RST-34 1 X 20' R/L HEAT C124677	30.00	20.00	PI_\$CLB		1x20'					
8 FLAT ALU 1/8 X 3/4 6061-T6 NS FAL-18346061 5 X 20' AC22321-SDI-2018/12/12 HEAT C1715501	11.30	100.00	PI_\$CLB		5x20'					

Note : ATTENTION: MILL TEST REQUIS

Conditions :

Total Weight (Lbs) : 398.59

NIR : R-109516-6

All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :

Verified By :

Delivered By :

Time

Customer's Signature

Date

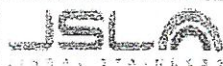
Y M D  
18/12/13



5747

RSS-1

21757



**MILL TEST CERTIFICATE**  
(INSPECTION CERTIFICATE)  
In Accordance with EN 10204 :2004 Type 3.1

Jindal Stainless (Hisar) Limited  
Hot Rolling Division

52711

CUSTOMER	EXCEL STAINLESS LLC	CERTIFICATE NO.	JSHL-HRD/QA/2018-19/ER/00001245
CITY	WARRENVILLE IL	DATE	29.08.2018
Q&NO	0970-LP	NET WT(Lbs)	9528.368
SALES ORDER NO.	3500010255	COMMERCIAL INV. NO.	H20181980211
PROFORMA INVOICE NO.	6100024950	OA DATE:28.03.2018	
		SO DATE:28.03.2018	
		DATE:29.08.2018	

Material Description/Product	STAINLESS STEEL HOT FINISHED ROUND BAR	Material Specifications	ASTM A276/A276M - 2017	Process-Route	EAF-AOD/VOD-LRF-CCS/INGOT	Dimension Tolerance specification	As per QA/PO Agreement.
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PHYSICAL DESCRIPTION										
SR NO	BATCH NO	PACKET NO	WEIGHT (Lbs)	NO OF PCS	HEAT NO	GRADE	DIA/SIZE (inch)	NOML. LENGTH (inch)	FINISH	QUALITY
1	1805AR7143	1805AR7143	440.924	1	1805J1078	304L/304	3.500	144.000	PP	PRIME
2	1802AR8027	1802AR8027	1186.086	4	1802J1147	304L/304	3.000	144.000	PP	PRIME
3	1805AR7000	1805AR7000	663.591	3	1805J1049	304L/304	2.500	144.000	PP	PRIME
4	1807AR7859	1807AR7859	1014.125	7	1807J1324	304L/304	2.000	144.000	PP	PRIME
5	1803AR7463	1803AR7463	1102.310	33	1803J1356	304L/304	1.000	144.000	PP	PRIME
6	1803AR7464	1803AR7464	1003.102	30	1803J1356	304L/304	1.000	144.000	PP	PRIME
7	1806AR8047	1806AR8047	1183.881	65	1806J1157	304L/304	0.750	144.000	PP	PRIME
8	1806AR8051	1806AR8051	1036.171	56	1806J1157	304L/304	0.750	144.000	PP	PRIME

CHEMICAL ANALYSIS TABLE																
SR NO.	HEAT NO	GRADE	C%	Mn%	S%	P%	Si%	Ni%	Cr%	N%	Mo%	Cu%	Ti%	Nb/Cb%	Al%	
1	1805J1078	304L/304	0.027	1.64	0.025	0.035	0.41	8.05	18.16	0.080						
2	1802J1147	304L/304	0.022	1.52	0.024	0.035	0.34	8.08	18.24	0.070						
3	1805J1049	304L/304	0.022	1.52	0.028	0.037	0.34	8.03	18.10	0.068						
4	1807J1324	304L/304	0.027	1.54	0.025	0.036	0.38	8.06	18.10	0.075						
5	1803J1356	304L/304	0.023	1.51	0.021	0.036	0.36	8.10	18.26	0.075						
6	1803J1356	304L/304	0.023	1.51	0.021	0.036	0.36	8.10	18.26	0.075						
7	1806J1157	304L/304	0.027	1.63	0.028	0.035	0.43	8.03	18.08	0.072						
8	1806J1157	304L/304	0.027	1.63	0.028	0.035	0.43	8.03	18.08	0.072						

MECHANICAL PROPERTIES SAMPLE DIRECTION - LONGITUDINAL										ADDITIONAL INFORMATION									
Sr No.	Packet/Batch No.	Dia/Size inch	Rp 0.2 YS ksi	Rp 1.0 ksi	Rm/TS ksi	%EL A 2 inch	%EL 50x50 inch	Hardness BHN	%RA										
1	1805AR7143	3.500	53.373		88.763	55		163		(1) Material solution annealed in accordance with requirements as laid in ASTM A 484/A 484M ED 2018 (Table 2, Annealing Requirements)									
2	1802AR8027	3.000	43.801		86.732	54		160		(2) Material also Conforms to ASTM A479/A479M-18, COND. A (Chemically & mechanically).									
3	1805AR7000	2.500	53.373		85.717	57		156		(3) IGC test as per ASTM A 262 practice (E) and after exposure the specimens were bent (1 T:180 degree) and inspected at magnification of 20X and found without any cracks.									
4	1807AR7859	2.000	55.839		86.732	56		160		(4) Micro examination: Step structures as per ASTM A 262 practice (A)									
5	1803AR7463	1.000	57.579		98.190	42		226		(5) Grain Size as per E112-2013 and conforms to ASTM No. 4 or Finer									
6	1803AR7464	1.000	57.579		98.190	42		226		(6) Macro examination - No centre segregation observed.									
7	1806AR8047	0.750	64.686		98.770	49		192		(7) No weld repair has been done on any bar.									
8	1806AR8051	0.750	64.686		98.770	49		192		(8) Dimension tolerances as per ASTM A484/A484M-18 under FINISH column PP stands for PEELED & POLISHED									

MILL TEST CERTIFICATE - PART 1 OF 5  
Buyer / Customer PO No. P207782

The material supplied under this Test Certificate is free from any radioactive contamination as checked by procedures established by Jindal Stainless (Hisar) Limited as per the recommendations provided by ARIH.

Jindal Stainless (Hisar) Limited,  
Hot Rolling Division,  
U.P. Jindal Marg, HISAR-125005, INDIA.  
TEL: +91-1662-222471-43  
FAX: +91-1662-222495, 220476  
Email: testing.fah@jshl.in  
Format Ref: QAD35/F4REV001, Ed: Date: 15/03/2018

This is hereby certified that the material was manufactured, sampled, tested & inspected in accordance with requirements of the material specification (SOP) and has been found to meet these requirements

QMS ISO 9001:2015  
CERTIFIED COMPANY

Documents Digitally signed by Jindal Stainless (Hisar) Limited  
Signer: Anil Mishra  
Date: 30 August 2018 17:45  
AUTHORISED SIGNATORY  
(QUALITY ASSURANCE DEPT.)

An unauthorised usage of this Test Certificate will warrant Legal Action

Heat: 1803J1356

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS ROUND BAR  
(NOTE: AISI 303 NOT ACCEPTABLE)

A SPECIFICATION:

ASTM A276  
M304R/D.DDD  
DIA. 1

PART NUMBER:

WHERE "D.DDD" = DIAMETER IN INCHES  
EG. 0.75" ROUND BAR = M304R0.750

RELEASED  
CT 28/25/14

B	REFORMAT DATE, ADD SHEETS (ZN D6 1)	CP	09.07.15
A	NEW ISSUE	AJS	08.03.03
REV	DESCRIPTION	BY	DATE
DESIGN	ASS		
DRAWN	QA		
CHECKED	3		
MFG. APPR.	M304R		
APPROVED	AP		
DE APPR.	AP		
DATE	09.07.15		
DART AEROSPACE LTD		REV B	
HAWKESBURY, ONTARIO, CANADA		SHEET 1 OF 1	
DRAWING NO.		SCALE	
TITLE		NTS	
304/316 ROUND BAR		COPYRIGHT © 1998 BY DART AEROSPACE LTD	

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304R1.000  
 DATE: 18/12/19

PO / BATCH NO.: P0041483/5138862

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 24.33Lr  
 QUANTITY INSPECTED: 24.33Lr  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.000"  
 THICKNESS RECEIVED: 1.000"  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	ASTM A276
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	LT: 1803J1356
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u> <u>9-89</u>	SIGNED OFF BY: _____
DATE: <u>18/12/19</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



3430

FESS-20G483042B

QUV - 51801  
21636  
52678

**MILL TEST CERTIFICATE**

Customer:

Steel Grade: AISI 304L

Date: 2018/07/25

Invoice No.: SQCAEW8602TE6

Surface Finish: 2B

Page: P03/P04

Goods: STAINLESS STEEL COLD ROLLED SHEETS

Specification: ASTM A240/A480

Certificate No.: PTTW028604TE6

Product ID	Chemical Composition (%)										Mechanical Properties					
	C	Si	Mn	P	S	Ni	Cr	N	Tensile Test			Hardness Test				
									Y.S. (Mpa)	T.S. (Mpa)	EL (%)	HRB	HV			
76S87832A-2	0.024	0.380	1.370	0.029	0.002	8.03	18.30	0.056				341	683	52.0	90	191
76S87832A-3	0.024	0.380	1.370	0.029	0.002	8.03	18.30	0.056				341	683	52.0	90	191
76S44518A-3	0.025	0.470	0.760	0.034	0.006	8.01	18.03	0.035				288	695	50.0	85	171
76S44518A-4	0.025	0.470	0.760	0.034	0.006	8.01	18.03	0.035				288	695	50.0	85	171
76S44518A-5	0.025	0.470	0.760	0.034	0.006	8.01	18.03	0.035				288	695	50.0	85	171
76S44518A-6	0.025	0.470	0.760	0.034	0.006	8.01	18.03	0.035				288	695	50.0	85	171
76S44518A-7	0.025	0.470	0.760	0.034	0.006	8.01	18.03	0.035				288	695	50.0	85	171
75S87600A-1	0.019	0.660	1.620	0.030	0.002	8.01	18.01	0.038				275	672	50.0	85	171
75S87600A-2	0.019	0.660	1.620	0.030	0.002	8.01	18.01	0.038				275	672	50.0	85	171
76S44518A-1	0.025	0.470	0.760	0.034	0.006	8.01	18.03	0.035				288	695	50.0	85	171
Product ID	Heat No.										Remarks					
76S87832A-2	LZ256A09										REFERRING TO ASTM SPEC					
76S87832A-3	LZ256A09										PO NUMBER: 18-P-266					
76S44518A-3	YU187406										LC NUMBER: DC HMN812260					
76S44518A-4	YU187406										OBL NUMBER: KHHMTRJ7829					
76S44518A-5	YU187406										CONTAINER NUMBER: MEDU7714189, MEDU6306285					
76S44518A-6	YU187406										Manager Of QA Dept.					
76S44518A-7	YU187406										JEE (CORRELATION LIMITED)					
75S87600A-1	LZ801376															
75S87600A-2	LZ801376															
76S44518A-1	YU187406										K.C.W.					

We hereby certify that material described herein has been manufactured and tested with satisfactory results in accordance with the requirement of the above material specification.

Heat YU187406

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SHEET  
ANNEALED

SPECIFICATION:

MIL-S-5059  
OR AMS 5513 (304)  
OR AMS 5524 (316)  
OR ASTM A240  
OR ASME SA240

FINISH:

FINISH IDENTIFIER  
DART M NUMBER IDENTIFIER  
1P  
2D  
NONE  
3P  
4P  
6P  
7P  
8P

PART NUMBER:

M304S1TT GA #P  
[GA]

WHERE "TT" = GAUGE THICKNESS  
WHERE "#P" = FINISH IDENTIFIER

EG. 16 GAUGE SS SHEET 2B FINISH = M304S16GA  
EG. 16 GAUGE SS SHEET No. 4 POLISHED = M304S16GA4P

GAUGE THICKNESS REFERENCE:

GAUGE	NOM. THICK. (IN)	THICKNESS RANGE (IN)
26	0.01875	0.0178 - 0.019
25	0.021675	0.0199 - 0.023
24	0.025	0.024 - 0.026
23	0.028125	0.027 - 0.029
22	0.03125	0.030 - 0.032
21	0.034375	0.033 - 0.035
20	0.0375	0.036 - 0.040
19	0.04375	0.041 - 0.046
18	0.050	0.047 - 0.052
17	0.05625	0.053 - 0.058
16	0.0625	0.059 - 0.065
15	0.0703125	0.066 - 0.072
14	0.078125	0.073 - 0.083
13	0.08375	0.084 - 0.098
12	0.109375	0.099 - 0.114
11	0.125	0.115 - 0.130
10	0.140625	0.131 - 0.145
9	0.15625	0.146 - 0.160
8	0.171875	0.161 - 0.176
7	0.1875	0.182 - 0.194
6	0.2031	0.194 - 0.212
5	0.2188	0.201 - 0.228
4	0.2344	0.225 - 0.243
3	0.2500	0.238 - 0.262
2	0.2656	0.254 - 0.278
1	0.2813	0.269 - 0.293
0	0.3125	0.301 - 0.325

RELEASED  
2015 FEB 04  
ECN 13-122 47

D	ADDED GAUGES D-7	AJS	15 01 06
C	DEFINED FINISH OPTION (ZB C8) AND EXAMPLE OF MATERIAL FIN WITH FINISH OTHER THAN 2B (ZB B5).	M8	12 09 20
B	REFORMAT DWG. ADD ASTM/ASME SPECS (ZB D8-1). ADD GAUGE REF (C8-1). REF. PAR 08-020A	CP	08 06 01
A	NEW ISSUE	DS	01 09 24
REV.	DESCRIPTION	BY	DATE
DRAWN	DS		
CHECKED	AJS		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	15 01 06		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M304S			
TITLE 304/316 SS SHEET			
REV. D SHEET 1 OF 1			
SCALE NTS			
COPYRIGHT © 2001 BY DART AEROSPACE LTD			

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304S206A

PO / BATCH NO.: P0041983/S138863

DATE: 18/12/19

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.040"

QUANTITY RECEIVED: 128sf

THICKNESS RECEIVED: 0.040"

QUANTITY INSPECTED: 128sf

SHEET SIZE ORDERED: 4'x8'

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: 4'x8'

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/>	N	
CORROSION	Y	<input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/>	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/>	N	ASTM A240
CORRECT THICKNESS	<input checked="" type="radio"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/>	N	HT: KU187406
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/>	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u>	SIGNED OFF BY: _____
DATE: <u>18/12/19</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



CKO

## ZHEJIANG GKO ALUMINIUM STOCK CO., LTD.

XIATAO, FENGJIANG, LUQIAO, TAIZHOU, ZHEJIANG, CHINA

TEL.: +86 576 82696583 FAX.: +86 576 82696589

## MILL TEST REPORT

Date: 2017-4-7
Invoice: CI63111-1
Contract No.: L63111
Loading Port: Tianjin, China
COUNTRY OF MELT & MANUFACTURE: CHINA

MATERIAL GRADE: 5052H32 AS PER "ASTM B209-14" - AMS/99 A 250/8 AND AMS 4016M

Destination: TORONTO

B/L NO.: YMLUW235126112

ISF NO.:

ETD: 2017-4-6

No.	PO NO.	DESCRIP TION OF GOODS:	ALLOY/T EMPER	Specification (inch)	Bundle No.	N.W. (lbs)	HEAT NO.	Chemical Composition(%)								Mechanical Properties				
								Al	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	T.S(ksi)	Yield.S. (ksi)	E(%)
1	L63111	SHEET	5052H32	0.04*48*96	5170210352-4	2945	5170210352	96.97	0.088	0.259	0.003	0.033	2.430	0.200	0.000	0.006	0.015	32.6	27.8	12.0
2	L63111	SHEET	5052H32	0.04*48*96	5170210352-3	2945	5170210352	96.97	0.088	0.259	0.003	0.033	2.430	0.200	0.000	0.006	0.015	32.6	27.8	12.0
3	L63111	SHEET	5052H32	0.04*48*120	5170210352-5	3347	5170210352	96.97	0.088	0.259	0.003	0.033	2.430	0.200	0.000	0.006	0.015	32.6	27.8	12.0
4	L63111	SHEET	5052H32	0.04*48*120	5170210352-6	3501	5170210352	96.97	0.088	0.259	0.003	0.033	2.430	0.200	0.000	0.006	0.015	32.6	27.8	12.0
5	L63111	SHEET	5052H32	0.125*48*144	5170310191-4	2731	5170310191	96.91	0.078	0.264	0.005	0.056	2.470	0.193	0.000	0.006	0.016	32.6	27.3	13.0
6	L63111	SHEET	5052H32	0.125*48*144	5170310191-5	2751	5170310191	96.91	0.078	0.264	0.005	0.056	2.470	0.193	0.000	0.006	0.016	32.6	27.3	13.0
7	L63111	SHEET	5052H32	0.25*48*120	5170210383-3	3355	5170210383	97.08	0.078	0.247	0.003	0.031	2.360	0.187	0.000	0.005	0.012	31.2	26.5	13.0
8	L63111	SHEET	5052H32	0.25*48*120	5170210383-2	3355	5170210383	97.08	0.078	0.247	0.003	0.031	2.360	0.187	0.000	0.005	0.012	31.2	26.5	13.0
9	L63111	SHEET	5052H32	0.25*48*120	5170210383-1	3355	5170210383	97.08	0.078	0.247	0.003	0.031	2.360	0.187	0.000	0.005	0.012	31.2	26.5	13.0

浙江巨科铝业股份有限公司

ZHEJIANG GKO ALUMINIUM STOCK CO., LTD.

Heat 5170210352

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 5052-H32 ALUMINUM SHEET

SPECIFICATION:

QQ-A-250/8 OR AMS-QQ-A-250/8  
OR AMS 4016  
OR ASTM B209

PART NUMBER:

M5052H32S | XXX |  
THK

WHERE "XXX" = SHEET THICKNESS (IN INCHES)

EG. 0.063" THICK SHEET = M5052H32.063

PREFERRED SIZE:

.XXX BY 4FT BY 8FT

RELEASED  
R 2009-10-30  
AMP

B	REFORMAT DWG	ADD B AND SPEC (N DR-1)	PAR 06-020A	CP	09 09 26
A	NEW ISSUE			DS	01 06 08
REV.	DESCRIPTION	BY	DATE		
DESIGN					
DRAWN					
CHECKED					
MFG APPR.					
APPROVED					
DE APPR.					
DATE	09 09 26				
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA					
DRAWING NO. M5052H32S					
TITLE 5052-H32 SHEET SPEC					
SHEET 1 OF 1					
SCALE NIS					
COPYRIGHT © 2001 BY DART AEROSPACE LTD.					



## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MS052H325.040  
 DATE: 18/12/19

PO / BATCH NO.: P0041983/S138864

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 325f  
 QUANTITY INSPECTED: 325f  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.040  
 THICKNESS RECEIVED: 0.040  
 SHEET SIZE ORDERED: 4'x8'  
 SHEET SIZE RECEIVED: 4'x8'

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<u>N</u>	
CORRECT FINISH	<u>Y</u>	N	
CORROSION	Y	<u>N</u>	
CORRECT GRAIN DIRECTION	<u>Y</u>	N	
CORRECT MATERIAL PER M-DRAWING	<u>Y</u>	N	<u>AMS QA A250/B</u>
CORRECT THICKNESS	<u>Y</u>	N	
PHOTO REQUIRED	Y	<u>N</u>	
CORRECT REF # TO LINK CERT	<u>Y</u>	N	<u>MT: J1070240352</u>
CORRECT MATERIAL IDENTIFICATION	<u>Y</u>	N	
CORRECT M# ON THE MATERIAL	<u>Y</u>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<u>N</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<u>N</u>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u> <span style="margin-left: 100px;">9-80</span>	SIGNED OFF BY: _____
DATE: <u>18/12/19</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

124561 Dart 22321N (2)

**HENAN MINGTAI AL. INDUSTRIAL CO., LTD**

HUIGUO ZHEN, GONGYI, HENAN, CHINA 451283

TEL: 371-67898611 EMAIL: shaw@hngymt.com

3174

**MILL TEST CERTIFICATE**

TO: TA CHEN INTERNATIONAL INC.  
5855 OBISPO AVENUE  
LONG BEACH, CA 90805  
TEL: (562)808-8199  
FAX: (562)808-8110  
H-TZTO180707

INVOICE NO.: L75515/L75517/L75518/N13293  
CONTRACT NO:  
LOADING PORT: XINGANG, CHINA  
DESTINATION: TORONTO, CANADA  
SHIPPING MARKS: N/M  
DATE: 23-Jul-18

DESCRIPTION OF GOODS:

ALUMINUM SHEET 3003 H14

CERTIFIED TO ALL AA, ASTM B209-14, AMS/QQA 250/2, AMS 4008K SPECS.

ALUMINUM TREAD PLATE 3003 H22/H24

CERTIFIED TO MINGTAI TREAD BRIGHT SPECS.

ALUMINUM SHEET 5052 H32

CERTIFIED TO ALL AA, ASTM B209-14, AMS/QQA 250/8, AMS 4016M SPECS.

CIF TORONTO, CANADA

**CHEMICAL COMPOSITION**

Alloy/Tmp	Lot No.	Specs(In)	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Othe rs	Al
STANDARD			0.6	0.7	0.05-0.2	1.0-1.5	-	-	0.1	-	0.15	REMAIN
3003 H22/H24	Z-1807YB054	.125*48*96	0.194	0.643	0.072	1.128	0.003	0.009	0.018	0.033	<0.15	REMAINDER
3003 H22/H24	Z-1807YB054	.125*48*120	0.194	0.643	0.072	1.128	0.003	0.009	0.018	0.033	<0.15	REMAINDER
3003 H22/H24	ZB-1807YB064	.188*48*120	0.190	0.597	0.069	1.054	0.010	0.007	0.018	0.034	<0.15	REMAINDER
3003 H22/H24	ZB-1807YB064	.188*48*144	0.190	0.597	0.069	1.054	0.010	0.007	0.018	0.034	<0.15	REMAINDER
3003 H14	GFA1806W30023	.100*60*120	0.180	0.554	0.108	1.112	0.007	0.010	0.010	0.036	<0.15	REMAINDER
3003 H14	GFA1807W30004	.040*48*96	0.166	0.580	0.106	1.168	0.020	0.009	0.013	0.034	<0.15	REMAINDER
3003 H14	GFA1807W30004	.040*48*120	0.166	0.580	0.106	1.168	0.020	0.009	0.013	0.034	<0.15	REMAINDER
3003 H14	GFA1807W30004	.050*48*96	0.166	0.580	0.106	1.168	0.020	0.009	0.013	0.034	<0.15	REMAINDER
3003 H14	GFA1807W30004	.050*48*120	0.166	0.580	0.106	1.168	0.020	0.009	0.013	0.034	<0.15	REMAINDER
3003 H14	GFA1807W30017	.100*48*96	0.191	0.576	0.114	1.135	0.013	0.016	0.035	0.032	<0.15	REMAINDER
3003 H14	GFA1807W30018	.125*48*120	0.156	0.574	0.117	1.133	0.024	0.009	0.030	0.032	<0.15	REMAINDER
3003 H14	GFA1807W30018	.125*48*144	0.156	0.574	0.117	1.133	0.024	0.009	0.030	0.032	<0.15	REMAINDER
3003 H14	GFA1807W30035	.080*60*120	0.160	0.595	0.117	1.187	0.015	0.011	0.026	0.033	<0.15	REMAINDER
3003 H14	GFB1804W30106	.080*60*120	0.157	0.560	0.112	1.115	0.011	0.013	0.010	0.033	<0.15	REMAINDER
3003 H14	GFB1805W30040	.100*60*120	0.179	0.582	0.121	1.108	0.018	0.017	0.021	0.031	<0.15	REMAINDER
3003 H14	GFB1805W30045	.125*48*96	0.174	0.557	0.106	1.116	0.015	0.016	0.014	0.031	<0.15	REMAINDER
3003 H14	GFB1805W30074	.125*60*120	0.185	0.551	0.106	1.127	0.017	0.011	0.022	0.034	<0.15	REMAINDER
3003 H14	GFD1807W30001	.190*60*120	0.183	0.554	0.104	1.105	0.010	0.009	0.005	0.031	<0.15	REMAINDER



Alloy-Tmp	Lot No.	Specs(In)	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others	Al
STANDARD			0.25	0.4	0.1	0.1	2.2-2.8	0.15-0.35	0.1	0.023	0.15	REMAIN
5052 H32	GFA1806W50093	.125*60*120	0.100	0.327	0.018	0.032	2.461	0.185	0.016	0.016	<0.15	REMAINDER
5052 H32	GFA1807W50003	.063*48*96	0.110	0.346	0.025	0.061	2.350	0.164	0.030	0.020	<0.15	REMAINDER
5052 H32	GFA1807W50003	.063*48*120	0.110	0.346	0.025	0.061	2.350	0.164	0.030	0.020	<0.15	REMAINDER
5052 H32	GFA1807W50026	.125*48*96	0.070	0.190	0.010	0.050	2.560	0.210	0.010	0.020	<0.15	REMAINDER
5052 H32	GFA1807W50026	.125*48*120	0.070	0.190	0.010	0.050	2.560	0.210	0.010	0.020	<0.15	REMAINDER
5052 H32	GFD1806W50078	.190*48*96	0.093	0.308	0.024	0.071	2.343	0.164	0.022	0.021	<0.15	REMAINDER
5052 H32	GFD1806W50078	.190*48*120	0.093	0.308	0.024	0.071	2.343	0.164	0.022	0.021	<0.15	REMAINDER

#### MECHANICAL PROPERTY

Alloy-Tmp	Lot No.	Specs(In)	Tensile strength		Yield strength		Elongation
			Mpa	Ksi	Mpa	Ksi	%
STANDARD			120-180		86-150		
3003 H22/H24	Z-1807YB054	.125*48*96	121	17.5	87	12.6	22
3003 H22/H24	Z-1807YB054	.125*48*120	121	17.5	87	12.6	22
3003 H22/H24	ZB-1807YB064	.188*48*120	122	17.7	99	14.4	22
3003 H22/H24	ZB-1807YB064	.188*48*144	122	17.7	99	14.4	22
STANDARD			140-178		120-160		
3003 H14	GFA1806W30023	.100*60*120	151	21.9	143	20.7	13
3003 H14	GFA1807W30004	.040*48*96	143	20.7	133	19.3	12
3003 H14	GFA1807W30004	.040*48*120	143	20.7	133	19.3	12
3003 H14	GFA1807W30004	.050*48*96	143	20.7	133	19.3	12
3003 H14	GFA1807W30004	.050*48*120	143	20.7	133	19.3	12
3003 H14	GFA1807W30017	.100*48*96	146	21.2	137	19.9	14
3003 H14	GFA1807W30018	.125*48*120	146	21.2	136	19.7	14
3003 H14	GFA1807W30018	.125*48*144	146	21.2	136	19.7	14
3003 H14	GFA1807W30035	.080*60*120	148	21.5	140	20.3	12
3003 H14	GFB1804W30106	.080*60*120	148	21.5	131	19.0	13
3003 H14	GFB1805W30040	.100*60*120	148	21.5	132	19.1	13
3003 H14	GFB1805W30045	.125*48*96	146	21.2	120	17.4	13
3003 H14	GFB1805W30074	.125*60*120	161	23.4	155	22.5	13
3003 H14	GFD1807W30001	.190*60*120	175	25.4	159	23.1	13
STANDARD			215-241		159-199		
5052 H32	GFA1806W50093	.125*60*120	215	31.2	179	26.0	16
5052 H32	GFA1807W50003	.063*48*96	225	32.6	194	28.1	10
5052 H32	GFA1807W50003	.063*48*120	225	32.6	194	28.1	10
5052 H32	GFA1807W50026	.125*48*96	216	31.3	186	27.0	13
5052 H32	GFA1807W50026	.125*48*120	216	31.3	186	27.0	13
5052 H32	GFD1806W50078	.190*48*96	219	31.8	183	26.5	14
5052 H32	GFD1806W50078	.190*48*120	219	31.8	183	26.5	14

PRODUCER: HENAN MINGTAI AL. INDUSTRIAL CO., LTD  
COUNTRY OF MELT AND MANUFACTURE: CHINA



1914

Heat: GFA1807W50003

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 5052-H32 ALUMINUM SHEET  
SPECIFICATION: QQ-A-250/8 OR AMS-QQ-A-250/8  
OR AMS 4016  
OR ASTM B209

PART NUMBER: M5052H32S | XXX | THK

WHERE "XXX" = SHEET THICKNESS (IN INCHES)  
EG. 0.063" THICK SHEET = M5052H32.063

PREFERRED SIZE: XXX BY 4FT BY 8FT

RELEASED  
R 2009-10-30  
AMP

B	REFORMAT DWG	ADD B009 SPEC (N D8-1)	PAR 08-020A	CP	03 09 26
A	NEW ISSUE			DS	01 06 08
REV.		DESCRIPTION	BY	DATE	
DESIGN					
DRAWN					
CHECKED					
MFG APPR.					
APPROVED					
DE APPR.					
DATE	09.09.26				
DART AEROSPACE LTD HAWKESBURY, ONTARIO CANADA					
DRAWING NO. M5052H32S					
REV. B					
SHEET 1 OF 1					
SCALE					
NIS					
5052-H32 SHEET SPEC					
COPYRIGHT © 2001 BY DART AEROSPACE LTD					



# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MS052 H325.063

PO / BATCH NO.: P0041983/8138865

DATE: 18/12/19

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.063"

QUANTITY RECEIVED: 32 sf

THICKNESS RECEIVED: 0.063"

QUANTITY INSPECTED: 32 sf

SHEET SIZE ORDERED: 4'x8'

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: 4'x8'

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	AMS QQ A 250/8
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	HT: GFA 1807W5003
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS 61</u>		SIGNED OFF BY: _____	
DATE: <u>18/12/19</u>		DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



5815

RST-34

18468

51821

# CERTIFICATE OF ANALYSIS

## CERTIFICAT D'ANALYSE

DATE 07/13/18

CUSTOMER ORDER NO. B 41352  
NO. DE LA COMMANDE DU CLIENTMILL ORDER NO. 268193-00  
NO. DE LA MILLPRODUCT DESCRIPTION  
PRODUIT DESCRIPTIONBILL OF LADING  
BON DE CONNAISSANCEMENT

L 94 FE10329343 YOUR ITEM # : V715412

3/4 RD 1144 20/22 FT

COLD FINISHED STEEL BARS CARBON  
COLD DRAWN & STRESS RELIEF ANNEALED  
"CENTURY" ASTM A311 CLASS B  
STANDARD AISI TOLERANCES  
C .40/.48 MN 1.35/1.65 P .040MAX S .24/.33  
TRANSPORT BY TRUCK - PROTECT WITH TARP  
CHEMICAL & MECHANICAL TEST REPORT REQUIRED  
ASTM A108

COUNTRY OF ORIGIN - CANADA  
HOT ROLL SOURCE : ARCELORMITTAL  
NAFTA CERTIFIED YES: X NO:

## LADLE ANALYSIS/ANALYSE DE LA COUILLER A COULER

HEAT NUMBER C124677	C.	.420	MN.	1.380	P.	.008	S.	.258
	SI.	.200	CU.	.030	NI.	.020	CR.	.020
	CB.		V.	.004	MO.	.004	PB.	
	B.		AL.	.001	SN.	.006		

### MECHANICAL PROPERTIES/PROPRIÉTÉS MECANQUES

HEAT NUMBER C124677

YIELD STRENGTH 112000 P.S.I. @ .2% OFFSET  
LIMIT D'ELASTICITE  
TENSILE STRENGTH 129000 P.S.I.  
RESISTANCE A LA TRACTION

ELONGATION (2 INCHES) 10.000 %  
ALLONGEMENT

REDUCTION OF AREA 29.000 %  
STRICTION

HARDNESS 255 HB  
DURETE

☐ MAG  
TEST

☒ ROTO  
TEST

☐ ULTRA  
SONIC TEST

NO WELDING OR WELD REPAIR PERFORMED ON THIS MATERIAL.  
THIS MATERIAL WAS NOT EXPOSED TO MERCURY DURING  
PROCESSING OR WHILE IN OUR POSSESSION.

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HAS BEEN TESTED IN ACCORDANCE WITH SPECIFICATION, AND THAT THE RESULTS ARE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.

PAR LES PRÉSENTES NOUS CERTIFIONS QUE LA MATIÈRE DÉCRITE A ÉTÉ TESTÉE CONFORMÉMENT AUX SPÉCIFICATIONS ET QUE LES RÉSULTATS SONT CORRECTS. COMME INDiqué DANS LES REGISTRES DE LA COMPAGNIE.

PER/PAR

REV.	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.08.09	WM	WM

2017.09.12

PURCHASE MATERIAL : AISI 1144 STRESSPROOF STEEL ROUND BAR  
SPECIFICATION: ASTM A311 or UNS G11440  
PART NUMBER: MT-1144-R [D.DDD]  
WHERE "D.DDD" = DIAMETER IN INCHES  
EG. 5/8" ROUND BAR = MT-1144-R0.625

[illegible]

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-1144-R0.750  
 DATE: 18/12/19

PO / BATCH NO.: P0041983/S138866

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 22ft  
 QUANTITY INSPECTED: 22ft  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.750"  
 THICKNESS RECEIVED: 0.750"  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<u>N</u>	
CORRECT FINISH	<u>Y</u>	N	
CORROSION	Y	<u>N</u>	
CORRECT GRAIN DIRECTION	<u>Y</u>	N	
CORRECT MATERIAL PER M-DRAWING	<u>Y</u>	N	<u>ASTM A311</u>
CORRECT THICKNESS	<u>Y</u>	N	
PHOTO REQUIRED	Y	<u>N</u>	
CORRECT REF # TO LINK CERT	<u>Y</u>	N	<u>HT: C124677</u>
CORRECT MATERIAL IDENTIFICATION	<u>Y</u>	N	
CORRECT M# ON THE MATERIAL	<u>Y</u>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<u>N</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<u>N</u>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 61</u> DATE: <u>18/12/19</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



124561

Dart

22321N



**LB ALUMINIUM BERHAD**  
(138535-V)

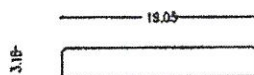


ALUMINIUM EXTRUSION

### MILL CERTIFICATE

	SECTION NO. : PE01452MF06100	DATE : Nov-23-2017
SALES ORDER NO. : 1817448	WORK ORDER : 770686	ALLOY : 6061-T6511
PRESS NO. : 1102	EXTRUSION DATE : Nov-18-2017	CERTIFICATE NO. : CN1715501
CUSTOMER PO NO. : P207292		

Section Sketch :



CHEMICAL COMPOSITION										
Composition	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Analysis Ref.-
Min	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	Remainder	76981
Max	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15		
Actual	0.746	0.229	0.200	0.112	1.041	0.055	0.015	0.012		Jun-03-2015

Compliance with ASTM B221M-07

We hereby certify that the material covered by this report has been verified or tested according to the seller standard sampling method or the requirements of any specifications or requirements described herein, and that sample representative of the material met the composition limits. Also, note that mercury is not a normal contaminant in aluminium alloys. Neither mercury nor any of its compounds are used in the manufacture of our extrusion. This certificate conforms to 3.1, EN 10204.

\*\* This certificate of Analysis has been produced electronically and is valid without signature \*\*

1/8 x 3/4

Lot 11, Jalan Perusahaan 1, Kawasan Perusahaan Beranang, 43700 Beranang, Selangor Darul Ehsan, Malaysia.  
Tel: 603-8725 8822 (15 Lines) Fax: 603-8725 8828 (General), 8725 8833 (Sales), 8725 8866 (Export)  
Enquiry@lbalum.com.my www.lbalum.com

Heat: CN 1715501

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR  
 SPECIFICATION: QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
 OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
 OR ASTM B211 OR ASTM B221

PART NUMBER: M6061T6B | T.TTT | X | WWW.WWW | THICK | WIDTH

WHERE "T.TTT" = THICKNESS IN INCHES  
 "WWW.WWW" = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

RELEASED  
 2009-05-03  
 AD

B		REMOVE QQ-A-250/1 OPTION REFERENCE NOTE S, ADD ASTM B211/B221 (2N D7-1)		CP	09.07.13
A		NEW ISSUE		DS	01.06.08
REV		DESCRIPTION		BY	DATE
DESIGN		DS		DART AEROSPACE LTD	
DRAWN		HAWKESBURY ONTARIO, CANADA		REV. B	
CHECKED		DS		DRAWING NO	
MFG. APPR.		M6061T6B		SHEET 1 OF 1	
APPROVED		TITLE		SCALE	
DE APPR.		6061-T6 BAR		NTS	
DATE		09.07.13		COPYRIGHT © 2007 BY DART AEROSPACE LTD	



# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061 T6B0.750x00.125

PO / BATCH NO.: P0041983/5138867

DATE: 18/12/19

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: ~~0.250"~~ 00.125"

QUANTITY RECEIVED: 100 ft

THICKNESS RECEIVED: 00.125"

QUANTITY INSPECTED: 100 ft

SHEET SIZE ORDERED: ✓

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: ✓

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	ASTM B221
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	HTICN1715501
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u> DATE: <u>18/12/19</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in